Published in final edited form as:

Psychol Violence. 2016 January ; 6(1): 112–123. doi:10.1037/a0038264.

Early Stigmatization, PTSD, and Perceived Negative Reactions of Others Predict Subsequent Strategies for Processing Child Sexual Abuse

Valerie A. Simon,

Merrill Palmer Skillman Institute, Department of Psychology, Wayne State University

Candice Feiring, and

Department of Psychology, The College of New Jersey

Charles M. Cleland

College of Nursing, New York University

Abstract

Objective—Trauma processing is central to healthy recovery, but few studies examine how youth process experiences of child sexual abuse (CSA). The current study builds on our prior work identifying individual differences in CSA processing strategies (i.e., Constructive, Absorbed, Avoidant) to examine whether abuse stigmatization, PTSD symptoms, and negative reactions from others experienced during the year after abuse discovery were associated with subsequent CSA processing strategies.

Method—Participants included 160 ethnically diverse youth (8–15 years, 73% female) with confirmed cases of CSA. Predictors were measured at abuse discovery (T1) and 1 year later (T2). Individual differences in CSA processing strategies were assessed 6 years after discovery (T3) from participants' abuse narratives.

Results—The persistence of abuse stigmatization from T1 to T2 significantly increased the odds of using either an Avoidant or Absorbed (vs. Constructive) strategy at T3. Higher levels of PTSD symptoms at T1 as well as their persistence from T1 to T2 each significantly increased the odds of having an Absorbed versus Constructive strategy. The persistence of perceived negative reactions from others from T1 to T2 increased the odds of an Absorbed versus Avoidant strategy. Effect sizes ranged from medium to large ($Md = 0.636$).

Conclusions—Results further validate prior work identifying distinct CSA processing strategies and suggest the persistence of abuse-specific disruptions over the year after abuse discovery may be associated with subsequent problems processing CSA experiences.

Keywords

negative reactions; PTSD; sexual abuse; stigmatization; trauma processing

Healthy strategies for processing experiences of child sexual abuse (CSA) are critical to long-term adaptation (Brewin, Dalgleish, & Joseph, 1996; Cohen, Mannarino, & Deblinger, 2006; Cloitre, Cohen, & Koenen, 2011). To facilitate healthy processing, several evidence-based, trauma-focused interventions use narrative or cognitive processing methods to help youth create adaptive stories of their abuse experiences (Cohen et al., 2006; Cloitre et al., 2011). These experiences include abuse events, their discovery, and sequelae (Spaccarelli, 1994). Adaptive stories include coherent accounts of such experiences and developmentally appropriate meanings that allow for realistic and positive views of the self, others, and relationships.

Little is known about the underlying processing strategies that promote or undermine adaptive stories, including the ways youth regulate attention to abuse-related memories, cognitions, and emotions as they story and evaluate their abuse experiences. To facilitate long-term adjustment, healthy strategies should enable youth to update their stories so that they remain adaptive across development and changing life circumstances (Ehlers & Clark, 2000; Harvey, Mishler, Koenen, & Harney, 2000; Janoff-Bulman, 2006). During adolescence and emerging adulthood, for example, evolving cognitive skills, perspective taking, regulatory capacities, and social roles should motivate renewed consideration of past CSA experiences (Allen & Miga, 2010; Lerner & Steinberg, 2009). Healthy processing requires an effortful balance of engaging with, distancing from, and reflection on abuse-related material in a way that allows youth to revisit past experiences and meanings from a present day perspective to story with concurrent adaptive value (Holmes, 2010; Horowitz, 1986).

Most research on trauma processing focuses on either noninter-personal traumas (e.g., automobile accidents) or interpersonal traumas occurring in adulthood (e.g., physical assault). Our work focuses on understanding individual differences in youths' strategies for processing CSA experiences, including the identification of healthy and unhealthy processing strategies, their associations with adjustment, and factors that promote or interfere with healthy processing. Thus far, our findings suggest three things: the need to process persists long after the abuse ends; efforts to process CSA are frequently guided by unhealthy strategies; and unhealthy processing strategies are associated with higher levels of concurrent adjustment problems (e.g., PTSD, sexual problems; Simon, Feiring, & Kobielski McElroy, 2010). Although these findings highlight the significance of CSA processing strategies for concurrent adjustment, they cannot explain which youth are more likely to develop different processing strategies. Such knowledge could identify youth at greatest risk for specific types of processing problems and highlight potential targets of intervention. This study takes a next step in understanding CSA processing by examining longitudinal associations between early abuse-specific disruptions and CSA processing difficulties during adolescence and early adulthood.

Individual Differences in CSA Processing Strategies

Given the clinical significance of adaptive stories to long-term adjustment, we examine youths' CSA processing strategies from their abuse narratives. Whereas most research on trauma processing focuses on narratives of abuse events, we examine abuse and abuse-related experiences as well as youths' past and current evaluations of the meaning and

effects of their experiences. In this way, our trauma narratives provide a window into youths' current strategies for organizing, regulating, and evaluating abuse-related memories, affects, and cognitions (Allen & Miga, 2010; Bruner, 1986; McAdams, 1993).

In a previous study, we identified three processing strategies that reflect systematic differences in how youth regulate attention and arousal to CSA-related memories, affects, and cognitions (Simon et al., 2010). The Constructive strategy underlies the effortful process by which youth create a coherent account of abuse events and adaptive meanings of abuse experiences. These activities require flexible deployment of engaging with and distancing from CSA material so that processing can unfold in manageable doses without cognitive or emotional overload. The Absorbed and Avoidant strategies capture two rigid approaches for engagement and distancing. The Absorbed strategy is marked by excessive attention to and the Avoidant strategy by habitual disengagement from traumatic memories, cognitions, and emotions.

Central to this work is a person-centered approach that considers the patterning of Constructive, Absorbed, and Avoidant strategies within each individual to identify a primary processing strategy (von Eye & Bergman, 2003). Because individuals might use multiple strategies to varying degrees (Horowitz, 1986), we designed our system to capture these variations and identify a primary strategy, if present. For example, a Constructive processor might exhibit many indicators of effortful approach and disengagement from CSA material but become mildly to moderately absorbed when discussing a particular aspect of the abuse experience. Conversely, an Absorbed processor might show somewhat balanced, effortful regulation when storying one aspect of the abuse that is overshadowed by dysregulated attention or difficulties maintaining a present day perspective when relating other aspects of the abuse narrative. To capture these meaningful variations, we designed a system for indexing individual differences in CSA processing that examines the strength of each strategy and the presence of a primary strategy. Beyond its face validity, this approach overcomes inherent difficulties of most past work that relies on variable-centered methods. Single variable measures locate different types of processing styles at the scale ends. For example, low scores on a continuous measure of absorbed processing may reflect either high levels of avoidance or high levels of healthy processing. Similarly, low scores on a measure of avoidant processing could indicate high use of either absorbed or healthy processing strategies.

Although strategies for processing CSA and coping share surface similarities in their emphasis on approach and avoidance, there are important differences. Coping models consider a broad range of behaviors to manage trauma-related distress. We focus on internal attention to and regulation of CSA-related memories, cognitions, and emotions while storying of abuse experiences over time. To illustrate, behavioral avoidance is widely considered a maladaptive coping strategy (e.g., Foa & Kozak, 1986). However, our work shows that high behavioral avoidance of traumatic reminders to regulate distress could reflect either Avoidant or Absorbed processing (Simon et al., 2010). Both Avoidant and Absorbed processors are motivated to minimize distress but differ in their underlying strategies for accessing, attending to, and evaluating CSA material. These differences are likely to be important in tailoring interventions to individuals, especially with regard to

facilitating adaptive trauma narratives. Our focus on internal strategies for storying abuse experiences also allows us to assess the processing strategies engaged during the narrative versus relying on self-reported behavior. For example, Absorbed processors may state that they try not to think about their abuse experiences but display difficulties inhibiting attention to or productively evaluating abuse experiences throughout the narrative. Avoidant processors may make similar claims; however, it is the manifestation of the strategy via brief fact-driven stories that are relatively devoid of emotion or meanings that typifies this approach to processing. Further, the observed manifestations of CSA processing strategies extend beyond what is typically considered in assessments of cognitive or emotional coping strategies. For example, Absorbed processing might be evidenced in some abuse narratives by ruminative discourse but in others as difficulties evaluating the abuse from a present day perspective, indicators of becoming overwhelmed by abuse material, or current and dysregulated anger.

In prior work, we showed that our system for indexing CSA processing strategies could reliably identify youths' primary strategies and that strategies showed the expected associations with concurrent psychosocial functioning (Simon et al., 2010). Absorbed youth reported the highest levels of all types of PTSD symptoms, depression, dissociation, abuse-specific stigmatization, and sexual problems whereas Constructive youth tended to report the fewest problems. Avoidant youth showed more symptoms of PTSD and dissociation than Constructive youth. Having established that youths' primary processing strategies showed meaningful patterns of relations with trauma-related outcomes, the next step was to examine early abuse-specific predictors of CSA processing. In the current study, we examined whether early abuse-specific disruptions to core developmental competencies were associated with later reliance on specific CSA processing strategies. The abilities to hold favorable representations of self, regulate emotion or arousal, and maintain positive views of others are core competencies frequently disrupted by CSA that can manifest as abuse stigmatization (a negative self-representation), posttraumatic stress (dysregulation), and perceptions of others' negative reactions to CSA (negative representations of others; Sroufe, Egeland, & Carlson, 1999). Each abuse-specific disruption is commonly experienced in connection with CSA, in its immediate aftermath and over time (Feiring, Simon, & Cleland, 2009; Feiring & Taska, 2005; Feiring & Cleland, 2007). We examined whether initial levels of these disruptions measured at abuse discovery and changes over the year following discovery were associated with later CSA processing.

Early Abuse Reactions and Subsequent CSA Processing

Abuse stigmatization involves feelings of shame and self-blaming attributions in relation to CSA experiences (Feiring, Taska, & Lewis, 1996). These negative emotions and cognitions about the self may occur during the abuse and its discovery and continue thereafter (Feiring & Taska, 2005; Feiring & Cleland, 2007). The self-condemnation of stigmatization undermines adaptive self-representations and triggers maladaptive control strategies, such as repetitive thinking about issues surrounding the trauma or cognitive avoidance (Ehlers & Clark, 2000; Ehring, Frank, & Ehlers, 2008). Therefore, we expected that higher levels of early abuse stigmatization would be associated with later Absorbed and Avoidant CSA processing strategies.

Symptoms of PTSD are common after CSA and might also interfere with constructive processing (Gladstone et al., 2004). Individuals with PTSD frequently experience trauma memories as sensory, perceptual, and emotional impressions rather than coherent autobiographical episodes (Brewin et al., 1996; van der Kolk & Fisler, 1995). The presence of PTSD symptoms at the stressful time of abuse discovery may be especially problematic because they thwart the articulation of the verbally mediated accounts from which meanings are derived and then integrated into broader systems of autobiographical memory or core beliefs (Brewin et al., 1996; Janoff-Bulman, 1992). Persistent aversive symptoms of re-experiencing or dysregulated reactions to intrusive trauma reminders tend to obstruct constructive processing (Ehring et al., 2008). Accordingly, we expected that early reactions characterized by more PTSD symptoms would be associated with subsequent reliance on Avoidant or Absorbed compared to Constructive processing.

Disbelief, victim blaming, and reprobation by others (e.g., family members) to the disclosure of CSA are associated with various adjustment problems (Ullman, 2007). When children perceive negative reactions from others over time, negative self-appraisals are reinforced and significant social bonds are threatened (Freyd, 1996). Beliefs that others are skeptical or blaming may heighten youths' attention to the self as a source of others' distress and interfere with the ability to disengage effectively from abuse-related material (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002). Such beliefs may also foster isolation from significant others who would otherwise serve to assist youth in the coregulation and coconstruction of CSA memories and meanings (Fivush, 2009; Oppenheim & Koren-Karie, 2009). We therefore expected that more negative reactions from others would be associated with subsequent reliance on Absorbed versus Constructive or Avoidant strategies.

The Current Study

The struggle of CSA survivors to make sense of their abuse experiences long after the abuse ends underscores the need to understand processing efforts in this population. (Park, 2010; Silver, Boon, & Stones, 1983; Wright, Crawford, & Sebastian, 2007). This study examined longitudinal data from youth with confirmed cases of CSA to assess whether initial levels of abuse-specific disruptions to the self, emotion regulation, and relationships measured at abuse discovery (T1) and changes in these disruptions over the year after abuse discovery (T1 to T2) predicted individual differences in reliance on specific CSA processing strategies six years after abuse discovery (T3). We were interested in the extent to which these abuse-specific disruptions, over and above differences in abuse severity (e.g., frequency, use of force), were associated with later CSA processing strategies. Indicators of severity do not directly tap the psychological processes that might impede healthy processing or poor mental health (Feiring & Taska, 2005).

We expected initial levels of stigmatization, PTSD, and negative reactions would be associated with later CSA processing; however, our primary focus was on whether *changes* in these abuse-specific disruptions over the year after abuse discovery were related to reliance on different strategies. The discovery of CSA is a stressful time for most families (Spaccarelli, 1994). Although elevated psychological distress is quite common in the immediate aftermath of abuse discovery, early disruptions to core competencies might be

associated with subsequent reliance on nonconstructive processing. More than initial levels, we believed the persistence of abuse stigmatization, PTSD symptoms, and negative reactions from others over the year after discovery would foretell later reliance on Absorbed or Avoidant rather than Constructive processing. During this year, contextual stressors associated with discovery and legal proceedings typically subside, and many youth experience decreases in abuse-related distress (Feiring & Cleland, 2007; Feiring, Taska, & Lewis, 2002; Goodman et al., 1992). However, persistent abuse-specific disruptions to the self, emotion regulation, and relationships over a year's time could signal later processing difficulties.

Method

Sample Selection and Characteristics

Participants were part of a prospective longitudinal study of the consequences of CSA. Child Protective Services (CPS) offices or regional child abuse medical clinics working with CPS provided referrals for the majority of the sample (95%). Eligible cases were first identified from CPS intake logs. Eligible youth were between ages 8 and 15 years, in the custody of a nonoffending parent or caregiver, and identified as a CSA case within 8 weeks from the date CPS opened the case. Caseworkers contacted families to obtain permission for project staff to contact them about the study. Sexual abuse was defined as sexual involvement with a juvenile or an adult perpetrator by coercion. The final recruited sample comprised children with confirmed cases of sexual abuse by at least one of the following criteria: specific medical findings, confession by the offender, abuse validated by an expert, or conviction of the offender in family or criminal court.

All but three of the 185 families approached by caseworkers agreed to be contacted by project staff. Of those, 160 agreed to participate and completed the initial assessment at abuse discovery (T1), before receiving any treatment. Approximately one year later ($M = 1.2$, $SD = .3$ years), 147 of the T1 participants returned for a second assessment (T2). The third assessment (T3) was obtained approximately six years after abuse discovery ($M = 6.2$, $SD = 1.2$ years) on 121 of the participants seen at T1; 118 participants were seen for all three assessments. Attrition was attributable to families declining to participate ($n = 23$) or failure to locate families ($n = 16$). Participants seen for all three assessments did not differ on demographic, abuse characteristics, or other study variables compared with the 29 participants who dropped out of the study at T3.

Between T1 and T2, 68% of the sample received some form of treatment, typically from community-based agencies (Mean length of treatment = 5.4 months., $SD = 4.7$ months.). Between T2 and T3, 39% received some form of treatment (Mean length of treatment = 8 months., $SD = 8.5$ months.). Participants in this study were not enrolled in a systematic treatment program, and we did not have control over who received treatment, the type of treatment received (e.g., trauma-focused cognitive-behavioral therapy vs. supportive therapy), or the expertise of the treatment providers. Because detailed treatment information was not documented, it was not possible to understand how such varied interventions were related to our predictions.

At T1, 55% of the sample were children ages 8 to 11 years ($M = 9.6$, $SD = 1.1$), and 45% were adolescents ages 12–15 years ($M = 13.5$, $SD = 1.1$); 73% were female. The majority of participants came from single-parent families (67%) and were poor (64%, with an income of \$25,000 or less). Ethnicity was self-reported as 41% African American, 31% White, 20% Hispanic, and 8% other, including Native American and Asian. Based on the most serious form of contact abuse reported, 67% experienced genital penetration. Almost all perpetrators were known to their victims, with 35% being a parent figure, 25% a relative, 37% a familiar person who was not a relative, and 3% a stranger. Forty-three percent of participants lived with the perpetrator at the time of the abuse. Frequency of the reported abusive events was once 30%, 2 to 9 times 40%, and 10 times or more 30%. The abuse lasted for a year or longer in 33% of cases. Use of force was reported in 25%, threat of force in 19%, and no force in 56% of the cases.

Procedure

All procedures for this study were approved by the institutional review boards of the academic institutions where the research took place. A certificate of confidentiality protected the data participants provided from being released without written consent. At each of the three assessment points, minor children provided written informed assent, and their parents/guardians provided written informed consent. At T3, participants who were 18 or older gave written informed consent. Assessment data were gathered via interview, questionnaire, and computer-assisted methods by a trained clinician in a private office. Abuse information was obtained from CPS and law enforcement case records at T1 after the children were interviewed. Participants were reimbursed a total of \$250 for completion of the initial and the two follow-up assessments.

Measures

Abuse characteristics—After the T1 assessment, trained staff members copied information on the following abuse characteristics from law enforcement agencies and CPS records to a checklist: the relationship of perpetrator to victim; frequency (number of events reported) and duration (dates began and ended) of the victimization; how the abuse was discovered; the types of abusive acts experienced (e.g., fondling, penetration); the use of physical force; medical findings; and how the case was confirmed. Based on records of 20 participants, two staff members copied information from the same case files onto the checklist with 100% or near 100% accuracy for each category of information. Coding of abuse information from the checklist (e.g., *identity of the perpetrator as a stranger* = 1, *familiar person* = 2, *relative* = 3, *parent figure* = 4) was completed by trained project personnel, among whom acceptable interrater reliability was obtained ($\kappa = .73$ – 1.0). A summary abuse severity index was calculated based on abuse characteristics that are related to poor outcomes and that are rated by professionals as more severe (Chaffin, Wherry, Newlin, Crutchfield, & Dykman, 1997). The abuse severity score was the sum of the most severe level of each of six abuse characteristics: penetration, parent figure perpetrator, perpetrator living with the child at the time of abuse, 10 or more abuse events, duration of abuse for a year or longer, and use of physical force. The score ranged from 0–6 with a mean of 2.4 ($SD = 1.5$).

Stigmatization—Abuse-specific shame and self-blame were assessed at T1 and T2 using items developed for this study (Feiring & Cleland, 2007; Feiring & Taska, 2005). A sample item from the shame scale reads, *I feel ashamed because I think that people can tell from looking at me what happened*. Items were rated on a 3-point scale ranging from 1 (*not true*) to 3 (*very true*). Items were summed, with higher scores indicating greater shame. For the abuse-specific self-blame items, participants rated the extent to which each of eight causal statements was true for why the abuse happened on the same 3-point scale used for shame (e.g., *I was to blame for what happened*). Item ratings were summed, with higher scores indicating more self-blame. These measures showed acceptable internal consistency at each assessment (shame $\alpha = .85$ at both T1 and T2; self-blame $\alpha = .75$ and $.73$ for T1 and T2). A summary stigmatization score was created because these two indicators theoretically define this construct and because abuse-specific shame and self-blame were moderately related at each assessment ($r = .44-.45$). Stigmatization scores at each assessment point were created using the average of the PMOP index scores abuse-specific shame and self-blame measures. For each assessment point, this yielded a stigmatization score that could range from 0 to 100, with higher values indicating more stigmatization.

Symptoms of posttraumatic stress disorder—The Children's Impact of Traumatic Events Scale – Revised (CITES-R; Wolfe, Gentile, Michienzi, & Sas, 1991), developed for samples of children with CSA histories, was used to assess PTSD symptoms at T1 and T2. Multitrait-multimethod matrix analyses support the convergent and discriminant validity of this measure. Children respond on a 3-point scale ranging from 1 (*not true*) to 3 (*very true*), with each subscale score derived from the mean of the subscale items. PTSD symptoms scores were computed at each age from the average of the arousal (6 items), intrusive thoughts (7 items), and avoidance (8 items) subscale scores. Higher PTSD scores indicate greater symptoms. The alpha coefficients for the PTSD scores were acceptable (.88 and .91 for T1 and T2).

Negative reactions of others—The CITES-R (Wolfe et al., 1991) was also used to index negative reaction by others at T1 and T2. The 9-item scale assesses youth's perceptions of the extent to which others' reacted negatively when they learned about the CSA (e.g., *Some people think I'm lying*). The higher the score, the more negative reactions by others ($\alpha = .80$ and $.79$ for T1 and T2).

CSA processing strategies—Individual differences in youths' strategies for processing CSA experiences were assessed at T3 using narratives generated from a semistructured interview conducted by project staff known to participants. Participants were asked to describe their abuse experiences, express their thoughts and feelings about the abuse and its discovery at the time it happened as well as over time, and explain the perceived effects of their experiences. Interviews ranged from 4 to 10 minutes in length, averaging around 5 minutes. They were audiotaped, transcribed verbatim by project staff unfamiliar with participants or study hypotheses, and checked for accuracy by an independent reader. All participants assessed at T3 agreed to the interview. Thirteen interviews were not coded because of technical problems ($n = 11$) or interviews deemed too brief to be reliably coded ($n = 2$). The remaining 108 narratives were coded using a system of structural discourse

analysis that was first developed on an independent set of 35 CSA narratives from a separate study and recently described at length by Simon and colleagues (2010). Consistent with a structural approach, the system considers both the content and style of participants' discourse. Details provided about abuse events were less important than the coherence and structure of the narrative and the manner in which youth conveyed abuse-related memories, affects, and cognitions. The coding system allows coders to rate the presence and strength of three processing strategies (Constructive, Absorbed, or Avoidant) and classify each narrative with a primary strategy. Although processing strategies are coded in consideration of the entire interview, Table 1 provides narrative excerpts for examples of the three strategies.

A Constructive narrative is characterized by evidence of effortful processing of CSA memories, affects, and cognitions. In addition to providing a coherent account of abuse events, Constructive youth recount vulnerable thoughts and feelings from a child's point of view while maintaining a present day perspective. They use these memories, thoughts, and feelings to construct appraisals regarding the causal circumstances of the abuse, meanings about their own or others' actions and reactions, and evaluations of the abuse's impact over time. Explicitly or implicitly, these constructions are viewed as active and open to revision in the face of changing circumstances. For example, Constructive youth may acknowledge changes in maturation, environment, or experience since the abuse that altered its meanings and implications. In this way, CSA experiences are clearly contained in the past, but their significance for past and current functioning remains open for consideration. Similarly, Constructive youth may acknowledge ongoing distress as they continue to process abuse-related memories, thoughts and feelings; yet they remain open to continued processing and may even describe ways in which they regulate their attention or distress to prevent feeling overwhelmed.

Absorbed and Avoidant narratives share a rigidity of processing; however, they differ markedly in underlying strategy for processing CSA experiences. Absorbed strategies reflect an engrossment in abuse-related memories, affects, or cognitions that impedes conceptual processing. Confusing or overly detailed descriptions of abuse experiences suggest difficulty constructing an incisive story of abuse experiences and convey a sense of being overwhelmed. "In-the-moment" accounts indicate a struggle to maintain a current day perspective on past events. Each of these narrative features conveys a fundamental difficulty containing and regulating abuse-related reactions in the service of discerning key information from which to construct useful meanings. In short, Absorbed youth view their abuse as important, but their attempts to evaluate CSA experiences are largely unproductive and lack insight. Processing may appear rigid or futile (e.g., excessive rumination or preoccupying anger) and convey a sense that whatever meanings have been derived are not readily amenable to new or discrepant input.

Unlike the approach orientation of Constructive and Absorbed strategies, the Avoidant processing strategy is marked by efforts to restrict attention to abuse-related memories, affects, and cognitions. Stories of abuse events may be extremely brief or fact-driven, with little spontaneous discussion of thoughts or feelings. Questions regarding abuse-related affect or cognition are typically met with marked distancing or minimization, and evidence of personal vulnerability is either absent or largely limited to the past. Efforts to understand

why abuse events occurred or to evaluate the impact of the abuse on the self or relationships are notably absent. Through content and manner, youth with Avoidant meaning-making strategies suggest that their abuse experiences are of little relevance to their present life or identity.

Two coders (including the first author) independently coded each CSA narrative to determine the presence of a primary processing strategy (Constructive, Absorbed, or Avoidant) using a two-stage approach. First, coders rated the presence and strength of each processing strategy in the transcript using a nine-point scale, with higher scores reflecting more pervasive use of that strategy. Next, coders used the constellation of processing style scale scores along with the narrative's fit to the overall descriptions of each processing strategy to determine whether a primary strategy was evident. A narrative was classified with one primary processing strategies when (a) the narrative was a good fit to only one of the overall strategy descriptors, (b) one of the processing strategies scale scores was at or above the scale midpoint (i.e., score of 5 or above) and was higher than the two other scale scores, and (c) the highest processing strategy scale score corresponded with the overall strategy fit. This classification method reflects a person-oriented approach to understanding how youth process CSA experiences whereby individuals rather than variables are treated as the unit of analysis, and the patterning of variables (e.g., processing style scores) rather than the linear relationships are used to capture the essential features of a system (von Eye & Bergman, 2003). Both coders were able to classify every narrative, except the two that were too short to code. Intraclass correlations for interrater reliability on the processing scales ranged from .83 to .92. Coders agreed on the classification for 101 of the 108 interviews ($\kappa = .89$, $p < .001$), and all disagreements were effectively resolved by consensus scoring. In addition, the scale score that corresponded with the overall classification was always at or above the scale midpoint ($M = 6.98$, $SD = 0.95$) and at least 1.5 points higher than next highest scale score. In most cases (96.7%), the difference between the classification scale score and the next highest score was at least two points, with the mean difference between these scores approaching four scale points ($M = 3.98$, $SD = 1.44$). As previously reported, approximately half of the study participants had an absorbed processing strategy at T3 (49%) while 36% had an avoidant strategy and 15% a constructive strategy (Simon et al., 2010).

To provide further empirical support for the coder rated classifications, latent profile analysis (LPA) in Mplus (Muthén & Muthén, 1998–2010) was used to classify participants into a small number of latent classes based on the continuous CSA processing strategy scores. These LPA classifications were compared with coder rated classifications. LPA models were estimated for two-, three-, and four-class solutions. Model fit was evaluated on the basis of (a) Bayesian information criteria (BIC) and likelihood ratio tests (Collins & Lanza, 2010), (b) substantive interpretation of class solutions, (c) size of profiles, and (d) comparison of class-specific means of the CSA processing strategy scores with the overall sample means to determine the uniqueness of each profile. Taking all of the evaluation criteria into account, the three-class solution was selected as best. The Lo-Mendell-Rubin likelihood test and BIC indicated better fit for the three- than two-class solution. Although the four-class solution had a smaller BIC and significantly better fit than the three-class solution, the additional class arose from dividing of the Constructive class into those where the second highest score was on the avoidant versus absorbed scale. We preferred the 3-class solution in which all

participants with high constructive scores remained in one group, given the relatively low number in the constructive class as well as a lack of theoretical basis for interpreting subtypes of constructive processors. Entropy was high for the three-class solution (0.996), and 96.3% of participants had a probability of 1.0 for their assigned class. Latent profile and coder rated classifications for the three classifications were highly consistent, $K = .994$. Taken together, these analyses provide strong empirical support for the coder rated CSA processing strategy classifications.

Missing Data

Missing data were handled by the multiple imputation method (Schafer & Graham, 2002), which is more powerful and less biased than ad hoc methods of handling missingness (e.g., listwise deletion). This approach assumes data are missing at random (MAR), that is, missing at random conditional on values observed. Missing data were imputed one hundred times using a chained equation approach (Van Buuren, 2007), as implemented by the “ice” command in Stata (White, Royston, & Wood, 2011). Estimates and standard errors from complete-data analyses of these one hundred imputed datasets were combined into a single inference (point estimate, standard error, and confidence interval) using the approach described by Rubin (1987).

Results

Data Analyses

The goal of the analyses was to determine whether early abuse reactions and changes in those reactions over the year after abuse discovery were associated with subsequent reliance on specific CSA processing strategies. Toward this end, we conducted multinomial logistic regression analysis to examine whether initial levels of abuse stigmatization, PTSD, and negative reactions from others and change in these factors over the year after abuse discovery predicted use of a primary CSA processing strategy six years later. Before the analyses, predictor variable scores at T1 and T2 were standardized, and change scores were calculated by subtracting the T1 from the T2 scores, and then standardizing those differences. Regressions for the three predictors (stigmatization, PTSD, negative reactions) examined how initial level and change were related to the odds of using each CSA processing strategy. These analyses used the constructive and then the avoidant strategy as the reference group for the categorical outcome variables (Absorbed vs. Constructive, Avoidant vs. Constructive and Absorbed vs. Avoidant). In addition to the standardized T1 predictor and the standardized change score, gender, age, and abuse severity were entered into the models as covariates, because previous work indicated they showed univariate associations with CSA processing strategies (Simon et al., 2010). The three processing strategy groups did not differ on race/ethnicity or income, so these variables were not included in the analyses. Analyses were computed using Stata 13 (StataCorp, 2013).

Descriptive Information

Table 2 and Table 3 show descriptive statistics and correlations for study variables. Because missing data were imputed, Table 2 includes two summaries of variability for each study variable. The within-imputation standard deviation describes the mean of the variability

within each imputed dataset. The between imputation standard deviation describes the variability of the mean across all imputed datasets. If no data are missing, the between-imputation standard deviation is zero, because the mean of the variable is the same for every dataset.

The continuous measures of stigmatization, PTSD, and negative reactions showed good variability, and each showed a moderate and statistically significant level of rank-order stability from the T1 to the T2 assessment point, as indicated by correlations in Table 3. The predictors showed moderate correlations with each other at each assessment point. Significant reductions from T1 to T2 in stigmatization (mean change = -12.12 , 95% CI: -15.27 to -8.97), PTSD symptoms (mean change = -1.99 , 95% CI: -2.51 to -1.46), and negative reactions (mean change = -2.26 , 95% CI: -4.57 to 0.06) were observed. Smaller change scores reflect greater improvements whereas larger change scores reflect greater persistence (or increase) in stigmatization, PTSD symptoms, or negative reactions over the year after abuse discovery.

Predicting CSA Processing Strategies

Table 4 shows the results of the multinomial logistic regressions using each type of abuse-specific disruption variable to predict subsequent membership in processing strategy group, organized by pairwise contrasts of processing strategy groups. In all of these analyses and consistent with prior findings, being a girl and older at abuse discovery were each associated with increased odds of reliance on a Constructive versus Avoidant processing strategy (Simon et al., 2010). As anticipated, abuse severity was not associated with CSA processing strategy.

Initial abuse disruptions and their persistence over the year after abuse discovery were associated with the odds of relying on one of the three CSA processing strategies. Abuse stigmatization at T1 was not significantly associated with later CSA processing; however, the persistence of stigmatization from T1 to T2 significantly increased the odds of being in each of the non-Constructive (Absorbed and Avoidant) compared with the Constructive strategy groups. More PTSD symptoms at T1 and the persistence of PTSD symptoms from T1 to T2 each significantly increased the odds of relying on an Absorbed versus Constructive CSA processing strategy at T3. Whereas abuse stigmatization and PTSD predicted reliance on a non-Constructive versus Constructive CSA processing strategies, negative reactions from others distinguished the two non-Constructive strategies. Specifically, continued perceptions of negative reactions from others regarding the abuse over T1 to T2 increased the odds of an Absorbed versus Avoidant processing strategy at T3. The significant odds ratios for all these differences are medium to large in size, with Cohen's d ranging from 0.48 to 0.71 ($M = 0.636$; Chinn, 2000; Cohen, 1998).

Discussion

The use of trauma narratives in evidence-based, trauma-focused therapies presupposes that helping youth develop adaptive stories of their abuse experiences promotes healthy processing. Our work seeks to identify ingredients of healthy and unhealthy CSA processing strategies and early predictors of these strategies that may become useful targets of

intervention. Building on earlier work linking unhealthy processing to concurrent adjustment problems, the current study provides evidence of longitudinal relations from early abuse-specific disruptions to later unhealthy processing strategies. The specific findings were largely consistent with our hypotheses that early abuse-specific disruptions to the self, emotion regulation, and relationships would predict processing problems and that abuse severity would not be related to strategies.

Changes in rather than initial levels of abuse-specific disruptions were more consistently related to reliance on specific CSA processing strategies. At T1, PTSD was the only significant predictor of T3 processing strategy. The persistence of abuse stigmatization, PTSD symptoms, and negative reactions from others over the year after abuse discovery each increased the odds of specific CSA processing difficulties. These effects spanned a six-year period and were medium to large in size (Cohen's d ranging from 0.48 – 0.71). Together, these results suggest the remediation of abuse-specific disruptions to the self, regulation, and relationships during the year after abuse discovery may be more important than youths' initial abuse reactions in reducing the risk for processing problems during late adolescence and early adulthood.

Persistent abuse stigmatization from discovery to a year later was associated with a greater likelihood of reliance on Absorbed and Avoidant versus Constructive CSA processing. The absence of a T1 association suggests the initial level of stigmatization cannot explain which youth will experience subsequent processing difficulties. Some youth may engage healthy processing strategies early on, which may promote productive reappraisals that facilitate the resolution of self-blame and shame (Cohen et al., 2006; Speckens, Ehlers, Hackmann, Ruths, & Clark, 2007). For others, early processing may be more problematic, and stigmatization may signal a more enduring view of the self in relation to abuse experiences with implications for poorer subsequent adaptation (Feiring et al., 2009; Feiring, Cleland, & Simon, 2010). The pain of abuse stigmatization might exacerbate dysfunctional processing strategies that perpetuate stigma and impede constructive CSA processing (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). Research on early abuse processing along with efforts to isolate sources of individual differences in regulating abuse stigmatization may identify youth most at risk for persistent stigmatization and reliance on unhealthy processing strategies.

Initial and persistent PTSD symptoms were associated with greater risk for reliance on Absorbed but not Avoidant processing. Research on other types of adult trauma links problematic initial trauma memories to both PTSD and processing difficulties (Dunmore, Clark, & Ehlers, 2001; Speckens et al., 2007). Our results are consistent with these findings and establish early PTSD symptoms and their persistence as unique risks for Absorbed versus Constructive CSA processing. Six years after abuse discovery, Absorbed processors struggled to construct incisive accounts of their abuse experiences, as evidenced by discourse markers such as entangled, perseverative, or otherwise unproductive efforts to evaluate past CSA experiences in light of present circumstances. Research on adults with other types of trauma suggests PTSD symptoms can provoke perseverative attention to trauma-related thoughts and feelings that serve to maintain symptoms and processing problems (Speckens et al., 2007). Prospective and developmentally informed research is

needed to discern how early efforts to manage PTSD symptoms might set the stage for Absorbed CSA processing.

The persistence of others' negative reactions to CSA over the year after discovery was also associated with Absorbed processing, albeit in an unexpected way. We hypothesized that negative reactions would distinguish Absorbed from Constructive processors, but our results indicated youth who continued to perceive negative messages from others from T1 to T2 were more likely to rely on Absorbed versus Avoidant processing strategies. When significant others are perceived as disbelieving or blaming, they are less capable of assisting youth in regulating and making meaning of difficult life events (Fivush, 2009; Oppenheim & Koren-Karie, 2009). As such, strong negative messages heighten and prolong attention to the abuse, the self as a source of others' distress, and the fragility of social bonds (Freyd, 1996). The absence of negative reactions permits disengagement from abuse-related material and may reinforce an avoidant stance toward the abuse. In some cases, significant others may deliberately dampen any overt reactions to the abuse out of worry that continued attention to abuse events will impede youths' recovery (Feiring, Taska, & Lewis, 1998). Research is needed to distinguish youths' perceptions of others' reactions from actual behavior.

Limitations

Although the current study is among the first to identify early predictors of CSA processing during adolescence and young adulthood, limits to the research should be kept in mind. First, the nonexperimental nature of the data precludes any conclusions about causal direction. Further, CSA processing strategies were assessed at one time point. Longitudinal assessments of strategies would provide stronger tests and greater insight into the causal directions underlying patterns of associations among abuse-specific reactions and CSA processing over time. The opportunity to observe these patterns was also restricted by a considerable time gap between the second and third assessments. Longitudinal assessments of processing could also provide important information about the role of development in CSA processing. The current study design could not discern the extent to which observed relations between age and CSA processing were attributable to developmental differences in the timing of the abuse, abuse discovery, or assessment of CSA processing (see Simon et al., 2010 for additional information). Interpretation of the current findings is somewhat limited by the small number of youth exhibiting Constructive CSA processing. The small number of Constructive processors six years after abuse discovery is not only a troubling commentary on the challenges to recovery from CSA, but suggests larger sample sizes will be needed to identify prospective predictors of healthy processing.

The current findings cannot address the implications for processing strategies of other stressful or traumatic experiences that often accompany sexual abuse. Although CSA has been shown to be uniquely associated with youth outcomes even when considering polyvictimization (e.g., Finkelhor, Ormrod, & Turner, 2007), the ways in which the type, timing, and number of other traumas may shape CSA processing is unknown. We also acknowledge the results rely on self-report methods, and multimethod assessments of abuse disruptions would provide stronger measurement of these factors. In addition, the external

validity of the study is limited to individuals for whom the abuse was reported to the appropriate authorities.

Clinical and Research Implications

Despite their limitations, the current findings underscore the value of longitudinal methods for identifying early risk factors for subsequent healthy and unhealthy CSA processing that may be amenable to clinical intervention. Collectively, previous and current findings linking early abuse-specific disruptions in core competencies, CSA processing strategies, and adjustment suggest important directions for treatment. Early interventions that support organized memory structures, foster effortful and flexible regulatory skills, and promote adaptive appraisals may be important for facilitating healthy processing and long-term adaptation. Several evidence-based, trauma-informed interventions for child and early adolescent victims of CSA address the abuse-specific disruptions in developmental competencies examined in this study (Cohen et al., 2006; Cloitre, Chase Stovall-McClough, Miranda, & Chemtob, 2004). For example, trauma-focused cognitive-behavioral therapy (TF-CBT; Cohen et al., 2006) uses narrative methods to provide youth with an integrated story of their abuse experiences. Building the narrative facilitates emotion regulation by desensitizing youth to traumatic reminders (to reduce PTSD symptoms) and reduces feelings of shame and self-blaming thoughts (abuse stigmatization) by encouraging a metacognitive perspective of the trauma as a life event rather than a defining feature of the self. Sessions with nonoffending parents help them cope with their own abuse-related distress and communicate effectively with their children about CSA experiences and related concerns. The extent to which such interventions foster the type of constructive conceptual processing assessed in the current study during adolescence and adulthood is an empirical question. Theoretically, the components of trauma-focused interventions should make it easier for youth to continue updating their understanding of the abuse in accordance with developing cognitive, emotional, and social capacities. This may be particularly helpful for successfully negotiating developmental tasks that often pose challenges to CSA youth, such as the emergence of romantic and consensual sexual relationships or the transition to parenthood (Harvey et al., 2000; Silver et al., 1983).

Beyond implications for early intervention, our findings suggest a need for research that examines trajectories of healthy and nonhealthy processing strategies from adolescence into adulthood. During this time, reflection on the meaning of life events intensifies and undisclosed or unexamined abuse experiences may become more distressing (Wright et al., 2007). Such reflection and distress may motivate treatment seeking. Understanding changes in processing strategies during this time period could be instrumental in developing treatments for adults, many of whom may not have reported the abuse as children or received trauma focused interventions.

Acknowledgments

The preparation of this article was made possible by grants from the National Institute of Mental Health—Grants MH074997 and HD061230 to Valerie Simon and Grant MH49885 to Candice Feiring. We gratefully acknowledge the efforts of Lynn Taska, Patricia Lynch, and Patricia Myers in data collection; Sarah Kobielski McElroy for her interview coding; and the children, adolescents, and families for their participation.

References

- Allen JP, Miga EM. Attachment in adolescence: A move to the level of emotion regulation. *Journal of Social and Personal Relationships*. 2010; 27:181–190. <http://dx.doi.org/10.1177/0265407509360898>. [PubMed: 20431705]
- Brewin CR, Dalgleish T, Joseph S. A dual representation theory of posttraumatic stress disorder. *Psychological Review*. 1996; 103:670–686. <http://dx.doi.org/10.1037/0033-295X.103.4.670>. [PubMed: 8888651]
- Bruner, J. *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press; 1986.
- Chaffin M, Wherry J, Newlin C, Crutchfield A, Dykman R. The abuse dimensions inventory. Initial data on a research measure of abuse severity. *Journal of Interpersonal Violence*. 1997; 12:569–589. <http://dx.doi.org/10.1177/088626097012004006>.
- Chinn S. A simple method for converting an odds ratio to effect size for use in meta-analysis. *Statistics in Medicine*. 2000; 19:3127–3131. [PubMed: 11113947]
- Cloitre M, Chase Stovall-McClough K, Miranda R, Chemtob CM. Therapeutic alliance, negative mood regulation, and treatment outcome in child abuse-related posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*. 2004; 72:411–416. <http://dx.doi.org/10.1037/0022-006X.72.3.411>. [PubMed: 15279525]
- Cloitre, M., Cohen, LR., Koenen, KC. *Treating survivors of childhood abuse: Psychotherapy for the interrupted life*. New York, NY: Guilford Press; 2011.
- Cohen, J. *Statistical power analysis for the behavioral sciences*. 2. New Jersey: Lawrence Erlbaum; 1988.
- Cohen, JA., Mannarino, AP., Deblinger, E. *Treating trauma & traumatic grief in children and adolescents*. New York, NY: Guilford Press; 2006.
- Collins, LM., Lanza, ST. *Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences*. New York, NY: Wiley; 2010.
- Dunmore E, Clark DM, Ehlers A. A prospective investigation of the role of cognitive factors in persistent posttraumatic stress disorder (PTSD) after physical or sexual assault. *Behaviour Research and Therapy*. 2001; 39:1063–1084. [http://dx.doi.org/10.1016/S0005-7967\(00\)00088-7](http://dx.doi.org/10.1016/S0005-7967(00)00088-7). [PubMed: 11520012]
- Ehlers A, Clark DM. A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*. 2000; 38:319–345. [http://dx.doi.org/10.1016/S0005-7967\(99\)00123-0](http://dx.doi.org/10.1016/S0005-7967(99)00123-0). [PubMed: 10761279]
- Ehring T, Frank S, Ehlers A. The role of rumination and reduced concreteness in the maintenance of posttraumatic stress disorder and depression following trauma. *Cognitive Therapy and Research*. 2008; 32:488–506. <http://dx.doi.org/10.1007/s10608-006-9089-7>. [PubMed: 20694036]
- Feiring C, Cleland C. Childhood sexual abuse and abuse-specific attributions of blame over 6 years following discovery. *Child Abuse & Neglect*. 2007; 31:1169–1186. <http://dx.doi.org/10.1016/j.chiabu.2007.03.020>. [PubMed: 18023871]
- Feiring C, Cleland CM, Simon VA. Abuse-specific self-schemas and self-functioning: A prospective study of sexually abused youth. *Journal of Clinical Child and Adolescent Psychology*. 2009; 39:35–50. <http://dx.doi.org/10.1080/15374410903401112>.
- Feiring C, Simon VA, Cleland CM. Childhood sexual abuse, stigmatization, internalizing symptoms, and the development of sexual difficulties and dating aggression. *Journal of Consulting and Clinical Psychology*. 2009; 77:127–137. <http://dx.doi.org/10.1037/a0013475>. [PubMed: 19170459]
- Feiring C, Taska LS. The persistence of shame following sexual abuse: A longitudinal look at risk and recovery. *Child Maltreatment*. 2005; 10:337–349. <http://dx.doi.org/10.1177/1077559505276686>. [PubMed: 16204736]
- Feiring C, Taska L, Lewis M. A process model for understanding adaptation to sexual abuse: The role of shame in defining stigmatization. *Child Abuse & Neglect*. 1996; 20:767–782. [http://dx.doi.org/10.1016/0145-2134\(96\)00064-6](http://dx.doi.org/10.1016/0145-2134(96)00064-6). [PubMed: 8866122]
- Feiring C, Taska LS, Lewis M. Social support and children's and adolescents' adaptation to sexual abuse. *Journal of Interpersonal Violence*. 1998; 13:240–260. <http://dx.doi.org/10.1177/088626098013002005>.

- Feiring C, Taska L, Lewis M. Adjustment following sexual abuse discovery: The role of shame and attributional style. *Developmental Psychology*. 2002; 38(1):79–92. <http://dx.doi.org/10.1037/0012-1649.38.1.79>. [PubMed: 11806704]
- Finkelhor D, Ormrod RK, Turner HA. Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology*. 2007; 19(1):149–166. <http://dx.doi.org/10.1017/S0954579407070083>. [PubMed: 17241488]
- Fivush, R. Co-constructing memories and meaning over time. In: Quas, JA, Fivush, R, Quas, JA., Fivush, R., editors. *Emotion and memory in development: Biological, cognitive, and social considerations*. New York, NY: Oxford University Press; 2009. p. 343–354. <http://dx.doi.org/10.1093/acprof:oso/9780195326932.003.0013>
- Foa EB, Kozak MJ. Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*. 1986; 99:20–35. <http://dx.doi.org/10.1037/0033-2909.99.1.20>. [PubMed: 2871574]
- Freyd, JJ. *Betrayal trauma: The logic of forgetting childhood abuse*. Cambridge, MA: Harvard University Press; 1996.
- Gladstone GL, Parker GB, Mitchell PB, Malhi GS, Wilhelm K, Austin MP. Implications of childhood trauma for depressed women: An analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *The American Journal of Psychiatry*. 2004; 161:1417–1425. <http://dx.doi.org/10.1176/appi.ajp.161.8.1417>. [PubMed: 15285968]
- Goodman GS, Taub EP, Jones DP, England P, Port LK, Rudy L, Melton GB. Testifying in criminal court: Emotional effects on child sexual assault victims. *Monographs of the Society for Research in Child Development*. 1992; 57:1–142. <http://dx.doi.org/10.2307/1166127>.
- Harvey MR, Mishler EG, Koenen K, Harney PA. In the aftermath of sexual abuse: Making and remaking meaning in narratives of trauma and recovery. *Narrative Inquiry*. 2000; 10:291–311. <http://dx.doi.org/10.1075/ni.10.2.02har>.
- Hatzenbuehler ML, Nolen-Hoeksema S, Dovidio J. How does stigma “get under the skin”? The mediating role of emotion regulation. *Psychological Science*. 2009; 20:1282–1289. <http://dx.doi.org/10.1111/j.1467-9280.2009.02441.x>. [PubMed: 19765237]
- Holmes, J. *Exploring in security: Towards an attachment-informed psychoanalytic psychotherapy*. New York, NY: Routledge/Taylor & Francis Group; 2010.
- Horowitz MJ. Stress-response syndromes: A review of posttraumatic and adjustment disorders. *Hospital & Community Psychiatry*. 1986; 37:241–249. [PubMed: 3957267]
- Janoff-Bulman, R. *Shattered assumptions: Towards a new psychology of trauma*. New York, NY: Free Press; 1992.
- Janoff-Bulman, R. Schema-change perspectives on posttraumatic growth. In: Calhoun, LG., Tedeschi, RG., editors. *Handbook of posttraumatic growth: Research and practice*. Mahwah, NJ: Erlbaum; 2006.
- Koren-Karie N, Oppenheim D, Dolev S, Sher E, Etzion-Carasso A. Mothers’ insightfulness regarding their infants’ internal experience: Relations with maternal sensitivity and infant attachment. *Developmental Psychology*. 2002; 38(4):534–542. <http://dx.doi.org/10.1037/0012-1649.38.4.534>. [PubMed: 12090483]
- Lerner, RM., Steinberg, L., editors. *Handbook of adolescent psychology, individual bases of adolescent development*. Vol. 1. New York, NY: Wiley; 2009.
- McAdams, DP. *The stories we live by: Personal myths and the making of the self*. New York, NY: William Morrow & Co; 1993.
- Muthén, LK., Muthén, BO. *Mplus user’s guide*. Los Angeles, CA: Author; p. 1998–2010.
- Oppenheim, D., Koren-Karie, N. Mother-child emotion dialogues: A window into the psychological secure base. In: Quas, JA, Fivush, R, Quas, JA., Fivush, R., editors. *Emotion and memory in development: Biological, cognitive, and social considerations*. New York, NY: Oxford University Press; 2009. p. 142–165. <http://dx.doi.org/10.1093/acprof:oso/9780195326932.003.0006>
- Park CL. Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*. 2010; 136:257–301. <http://dx.doi.org/10.1037/a0018301>. [PubMed: 20192563]
- Rubin, DB. *Multiple imputation for nonresponse in surveys*. New York, NY: Wiley; 1987. <http://dx.doi.org/10.1002/9780470316696>

- Schafer JL, Graham JW. Missing data: Our view of the state of the art. *Psychological Methods*. 2002; 7:147–177. <http://dx.doi.org/10.1037/1082-989X.7.2.147>. [PubMed: 12090408]
- Silver RL, Boon C, Stones MH. Searching for meaning in misfortune: Making sense of incest. *Journal of Social Issues*. 1983; 39:81–101. <http://dx.doi.org/10.1111/j.1540-4560.1983.tb00142.x>.
- Simon VA, Feiring C, Kobielski McElroy S. Making meaning of traumatic events: Youths' strategies for processing childhood sexual abuse are associated with psychosocial adjustment. *Child Maltreatment*. 2010; 15:229–241. <http://dx.doi.org/10.1177/1077559510370365>. [PubMed: 20498128]
- Spaccarelli S. Stress, appraisal, and coping in child sexual abuse: A theoretical and empirical review. *Psychological Bulletin*. 1994; 116:340–362. <http://dx.doi.org/10.1037/0033-2909.116.2.340>. [PubMed: 7972595]
- Speckens AEM, Ehlers A, Hackmann A, Ruths FA, Clark DM. Intrusive memories and rumination in patients with post-traumatic stress disorder: A phenomenological comparison. *Memory*. 2007; 15:249–257. doi:10.1080/09658210701256449. [PubMed: 17454662]
- Sroufe, L., Egeland, B., Carlson, EA. One social world: The integrated development of parent–child and peer relationships. In: Collins, W., Laursen, B., editors. *Relationships as developmental contexts*. Mahwah, NJ: Erlbaum; 1999. p. 241–261.
- StataCorp. Stata statistical software: Release 13. College Station, TX: StataCorp LP; 2013.
- Ullman SE. Relationship to perpetrator, disclosure, social reactions, and PTSD symptoms in child sexual abuse survivors. *Journal of Child Sexual Abuse*. 2007; 16:19–36. http://dx.doi.org/10.1300/J070v16n01_02.
- van Buuren S. Multiple imputation of discrete and continuous data by fully conditional specification. *Statistical Methods in Medical Research*. 2007; 16:219–242. <http://dx.doi.org/10.1177/0962280206074463>. [PubMed: 17621469]
- van der Kolk BA, Fislis R. Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress*. 1995; 8:505–525. <http://dx.doi.org/10.1002/jts.2490080402>. [PubMed: 8564271]
- Von Eye A, Bergman LR. Research strategies in developmental psychopathology: Dimensional identity and the person-oriented approach. *Development and Psychopathology Special Issue: Conceptual, Methodological, and Statistical Issues in Developmental Psycho-pathology: A Special Issue in Honor of Paul E. Meehl*. 2003; 15:553–580.
- White IR, Royston P, Wood AM. Multiple imputation using chained equations: Issues and guidance for practice. *Statistics in Medicine*. 2011; 30:377–399. <http://dx.doi.org/10.1002/sim.4067>. [PubMed: 21225900]
- Wolfe VV, Gentile C, Michienzi T, Sas L. The Children's Impact of Traumatic Events Scale: A measure of post-sexual-abuse symptoms. *Behavioral Assessment*. 1991; 13:359–383.
- Wright MO, Crawford E, Sebastian K. Positive resolution of childhood sexual abuse experiences: The role of coping, benefit-finding, and meaning-making. *Journal of Family Violence*. 2007; 22:597–608. <http://dx.doi.org/10.1007/s10896-007-9111-1>.

Table 1

Examples of Individual Differences in CSA Processing Strategies

Processing strategy	Samples from interview transcript
Constructive	<p>At the time, and for a while after, I felt dirty, different from other kids. I stopped, um, hanging around my friends because I really didn't want to be around anyone. I didn't know how to express what I was feeling and I like held it all inside. But eventually I just couldn't do that anymore and, you know, I had to start dealing with it, cause if I didn't it would just keep getting bigger and bigger. Not like all at once you know, but bit by bit. I'm not sure I'll ever totally understand why it happened. I mean it's like a sentence for a crime I didn't commit. But I have to, you know, accept it. So I'm figuring out how to deal with it—not completely, well not yet, but in some ways. So I can be a teenager and continue on with my life.</p> <p>*****</p> <p>Used to be I'd look back on it and just like kick myself, you know, thinking <i>I just could have so easily just gotten up and ran</i>. And comes a point where you just can't do that anymore—all that <i>Why didn't I stop it?</i> business. I just realized, you know, really understood that I was so paralyzed with fear there was nothing I could do about it. Not that I don't still every so often look back and think <i>Why didn't I get up and run?</i> but, you know, not much, and I understand it differently.</p>
Absorbed	<p>It was one of the kinds of things that happened but it was over with and nobody was there. I don't remember when it started. Ok, what happened, yes. My cousin—he is...does...um...God...Lord—[30 sec]. When I am, it's hard because when it first happened, well not at first, but I told then. It was just that, but after that, I never talked about it anymore. I don't know what to say. Where do you even begin? It's just too much, I don't know.</p> <p>*****</p> <p>... and when I tell somebody, I am mad that the one person I mean I was extremely mad, I still am to this day, I mean the one person that's supposed to be there for me 24–7 for the rest of my life 'til whenever you know, she lives—she doesn't believe me, my mother and this is my mom, and she doesn't believe me and I am eight years old.</p>
Avoidant	<p>Ok. Well, I had a molestation and it entered court and they took care of it. You know, all that typical big mess that you see on TV. I was like a kid at the time. Of course, it was his fault, so I mean, it didn't really bother me.</p> <p>*****</p> <p>It doesn't bother me. Like I was upset that it happened but it don't bother me or nothing. Like I said, it's not a really big issue in my life. There's other things that's more important that's going in my life you know than that right there. So it's not a dweller situation it, cuz it didn't affect me at all you know. I just know that it happened and, that's it.</p>

Note. Excerpts are for illustrative purposes. Coders' scores for transcripts were based on the content of statements in context and in consideration of the entire transcript.

Table 2

Descriptive Statistics for Study Variables

Variable	Mean	Within imputation <i>SD</i>	Between imputation <i>SD</i>	Median	Minimum ^a	Maximum ^a	Non-missing observations
1. Female	0.725	0.448	0.000	1.000	0.000	1.000	160
2. Age	11.356	2.241	0.000	11.000	7.000	15.000	160
3. Abuse severity	2.990	1.526	0.009	3.000	0.000	6.000	148
4. Stigma T1	32.079	19.188	0.000	30.556	0.000	100.000	160
5. Stigma T2	19.950	17.266	0.448	18.393	-29.162	82.639	146
6. PTSD T1	15.253	3.223	0.000	15.349	8.159	21.726	160
7. PTSD T2	13.275	3.519	0.085	12.840	0.809	24.733	145
8. Negative reactions T1	51.936	14.881	0.000	46.615	37.320	104.210	160
9. Negative reactions T2	49.682	14.345	0.340	44.750	-3.812	105.063	145
10. Absorbed	0.487	0.501	0.025	0.000	0.000	1.000	108
11. Constructive	0.148	0.355	0.017	0.000	0.000	1.000	108
12. Avoidant	0.365	0.483	0.021	0.000	0.000	1.000	108

Note. Stigma = abuse stigmatization; PTSD = posttraumatic stress disorder; Negative Reactions = negative reactions of others for CSA.

^a Values for missing T2 values are imputed and multiple imputation procedures may yield rare values that fall outside of bounded variable regions.

Table 3

Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9
1. Female	—								
2. Age	0.07	—							
3. Abuse severity	0.21*	0.06	—						
4. Stigma T1	0.13	0.05	0.07	—					
5. Stigma T2	0.10	0.01	0.09	0.43*	—				
6. PTSD T1	0.28*	0.00	0.06	0.58*	0.38*	—			
7. PTSD T2	0.29*	0.04	0.05	0.32*	0.66*	0.55*	—		
8. Negative reactions T1	0.01	0.21*	-0.05	0.49*	0.32*	0.37*	0.16	—	
9. Negative reactions T2	0.15*	0.23*	0.05	0.31*	0.50*	0.29*	0.42*	0.52*	—
10. Absorbed	0.11	0.06	0.03	0.13	0.12	0.20*	0.31*	0.04	0.24*
11. Constructive	.016*	0.18*	-0.01	-0.01	-0.18*	-0.07	-0.21*	0.00	0.02
12. Avoidant	-0.23*	-0.21*	-0.03	-0.13	0.01	-0.14	-0.16	-0.04	-0.26*

Note. The standard error of the correlation coefficient for each imputation was assessed via bootstrapping and then a combined inference was made by considering sampling variability within imputations and variability in coefficient estimates between imputations. Stigma = abuse stigmatization; PTSD = posttraumatic stress disorder; Negative Reactions = negative reactions of others for CSA.

* $p < .05$.

Table 4

Odds Ratio Point and Interval Estimates for Multinomial Logistic Regressions Predicting CSA Processing Strategies From Gender, Age, Abuse Severity, T1 Abuse Reactions, and Change in Abuse Reactions From T1-T2

Abuse reaction	CSA processing group comparison ^a	Odds ratio	OR CIL	OR CIU
Abuse stigmatization	Absorbed vs. Constructive			
	Female	0.23	0.02	2.06
	Age in yrs.	0.80	0.60	1.07
	Abuse severity	1.10	0.75	1.61
	T1	2.65 ⁺	0.94	7.48
	T2-T1 change	3.22 [*]	1.04	9.98
	Avoidant vs. Constructive			
	Female	0.10 [*]	0.01	0.90
	Age in yrs.	0.67 [*]	0.49	0.92
	Abuse severity	1.15	0.76	1.74
	T1	2.10	0.72	6.11
	T2-T1 change	3.48 [*]	1.06	11.38
	Absorbed vs. Avoidant			
	Female	2.34 ⁺	0.89	6.12
	Age in yrs.	1.19 ⁺	0.97	1.44
	Abuse severity	0.96	0.72	1.27
	T1	1.26	0.77	2.05
	T2-T1 change	0.92	0.56	1.54
PTSD symptoms	Absorbed vs. Constructive			
	Female	0.12	0.01	1.28
	Age in yrs.	0.79	0.58	1.07
	Abuse severity	1.17	0.77	1.76
	T1	3.24 ^{**}	1.36	7.70
	T2-T1 change	3.63 ^{**}	1.51	8.73
	Avoidant vs. Constructive			
	Female	0.07 [*]	0.01	0.71
	Age in yrs.	0.66 [*]	0.48	0.91
	Abuse severity	1.20	0.78	1.85
	T1	2.00	0.82	4.89
	T2-T1 change	2.46 ⁺	0.99	6.13
	Absorbed vs. Avoidant			
	Female	1.76	0.64	4.84
	Age in yrs.	1.18	0.97	1.45
	Abuse severity	0.97	0.72	1.30
	T1	1.62 ⁺	0.98	2.68

Abuse reaction	CSA processing group comparison ^a	Odds ratio	OR CIL	OR CIU
Negative reactions from others	T2–T1 change	1.48	0.90	2.43
	Absorbed vs. Constructive			
	Female	0.27	0.03	2.25
	Age in yrs.	0.81	0.62	1.07
	Abuse severity	1.10	0.75	1.60
	T1	1.44	0.72	2.88
	T2–T1 change	1.40	0.71	2.77
	Avoidant vs. Constructive			
	Female	0.12 ⁺	0.01	1.07
	Age in yrs.	0.70 ⁺	0.52	0.94
	Abuse severity	1.16	0.77	1.75
	T1	0.84	0.37	1.93
	T2–T1 change	0.58	0.24	1.40
	Absorbed vs. Avoidant			
	Female	2.16	0.80	5.80
	Age in yrs.	1.16	0.94	1.42
	Abuse severity	0.95	0.70	1.27
	T1	1.71 ⁺	0.92	3.17
	T2–T1 change	2.40 ^{**}	1.20	4.80

Note. Gender coded as 0 = male versus 1 = female; Age in yrs. at abuse discovery (T1).

^aThe first two comparisons use Constructive and the third used the Avoidant processing as the reference group.

⁺ $p < .10$.

^{*} $p < .05$.

^{**} $p < .01$.